DOCUMENT RESUME

ED 228 909 HE 016 012

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TITLE Comparisons in the Organisation, Methods, and Results of the Universidad Nacional de Educacion a Distancia (Spain) and The Open University of The United Kingdom.
INSTITUTION Open Univ., Walton, Bletchley, Bucks (England).
PUB DATE 82
NOTE 100p.; For related document, see HE 016 013.
AVAILABLE FROM The Open University, London Region, Parsifal College, 527 Finchley Road, London NW3 7BG, England.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS College Administration; College Programs; *Comparative Education; *Extension Education; *External Degree Programs; *Foreign Countries; Higher Education; Instructional Materials; *Open Universities; Outcomes of Education; School Organization; Student Characteristics; Teaching Methods
IDENTIFIERS Distance Education; *Open University (Great Britain); *Univ Nacional de Educacion a Distancia (Spain)

ABSTRACT

The organization, methods, and outcomes of the distance education systems at the Universidad Nacional de Educacion a Distancia (UNED) in Spain and The Open University of the United Kingdom are compared. The following topics are covered: higher education in Spain, UNED's ideology, student characteristics in both universities, organization, administration and control, duties and responsibilities of the UNED staff, regional centers, the teacher-tutor system, admission policies, course offerings, enrollments, course development and delivery, the production of written and audio materials, academic credits, the use of study units and audiovisual materials, student assessment, finances, staffing levels, program evaluation, degrees, student views of the schools, teacher-tutor views, and dropouts. Among the conclusions are the following: both UNED and Open University are reaching out to a new audience similar in age, social background, and education, and both are using new methods and offering students an education on easier terms than those in campus universities. However, there are vast differences between the two systems at all levels from organization to practice to results. (SW)

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COMPARISONS IN THE ORGANISATION, METHODS AND RESULTS OF THE UNIVERSIDAD NACIONAL DE EDUCACIÓN A DISTANCIA (SPAIN) AND THE OPEN UNIVERSITY OF THE UNITED KINGDOM

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1982

HE 016 012

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PURPOSE OF THIS STUDY

In Spain today (1981) almost one person in 800 is studying part-time at home with specially-designed self instructional materials for some qualification of the Universidad Nacional de Educación a Distancia - the UNED. Given the differences in population size of Spain (33.4 million) and the United Kingdom (56.0 million), this means that the UNED is proportionately as large as the United Kingdom's Open University - the Open - with its 61,000 students. It is just one of a number of distance education (off-campus) universities that have grown up worldwide in the 1970's, a time of great power and influence of the Open as a model for many of them. Numerous articles have been written about individual institutions, García Garrido (1976) on UNED, Perry (1976) on the Open for instance, but nothing appears to have been written in the comparative genre. Yet the process of understanding anything implies comparison with background knowledge, and this is usually easier if comparisons are explicit rather than implicit. It would be useful and interesting to try to make a start, and the aim of this study is to compare the UNED with the Open.

From the start it must be accepted that comparative studies can never "prove" anything in the scientific sense since one is dealing with naturally occurring populations where background differences and mitigating circumstances must enter into interpretations, explanations, and judgments. But such lines of enquiry can be fruitful in raising questions, generating hypothesis for further study, identifying value matters or

problems, and stimulating those of us in distance education to question methods and think of alternative ways of acting, and so freeing us from being prisoners of our own model.

It was thought preferable to have a general look at the terrain rather than to describe, analyse, and compare in detail one particular feature. So selection is inevitable due to constraints of time, space, and personal limitations in interests and capabilities, and superficiality at various points is admitted. The report is not a polemic: facts from primary and secondary sources are brought together to locate the source and nature of differences, prior to comment.

Since the source of collecting data is a continuous one, some point had to be taken at which the value of new information was negligible. The information cut-off for this study was mid-1981.

BACKGROUND

It is important to remember some of the differences between Spain and the United Kingdom in religious, economic, social, and political characteristics which go to make up its culture since these will condition what individuals believe and value and how they view the world. In turn this will affect the institutional goals or norms and define important structural or technical patterns within organisations.

For a start, Spain is largely Roman Catholic while the United Kingdom is Protestant. Brubacher (1950) discusses the effects of different metaphysics on the educational process which is too detailed to go into here. Basically, a strong belief in the supernatural, as in Roman Catholicism, will be seen in an authoritarian or essentialist type of curriculum, whereas the secular, in which the United Kingdom might be included, is seen in a more pragmatic type of curriculum. Laid over this deep spiritual difference between Spain and the United Kingdom are vast differences in the other characteristics.

In December 1955, Spain's acceptance as a full member of the United Nations formally brought to an end the decade long ostracism of the country. Then 20 years later Francisco Franco died, and 40 years of dictatorship gave way to a monarchy under Juan Carlos, and a change of constitution, and free general and municipal

elections. The general administration of the country is still centralised in Madrid, but a shift towards greater regional autonomy is under way. The Basque country and Catalonia have already established their own parliaments. Naturally it is difficult for people to adjust to the freedom offered by a democratic system, and doubts exist whether democracy can work. It is said that giving a Spaniard freedom is like giving an alcoholic a drink, and the barrel of a gun still appears to be seen as an instrument of political change, as instanced by the abortive coup of 23 February 1981. Education is an area for political squabbles as Alonso Hinojal (1980) and Faubell Zapata (1979) make clear. Not unnaturally teachers in all sectors are puzzled and confused by the plethora of conflicting opinions, conjecture, and hypothesis.

Spain has one of the fastest growing economies in Europe, and in the 1970s was in a process of transformation from an underdeveloped to a developed country, In 1965 one third (34 per cent) of Spain's 12 million labour force worked in agriculture and fishing and less than that (31 per cent) in the service industries. But by 1979 the figure was 18.3 per cent and 41.5 per cent of a 13 million force. There has been a marked drift away from the land to the towns and from the lesser to the more developed regions. Spain's transitional status is shown in its comparative (by European standards) low standard of living. Vast changes in the content and process of higher education are needed if Spain is to enter the mainstream of industrial societies, says Horowitz an American economist.

Horowitz believes that "less emphasis should be given to the traditional professions while placing greater emphasis on the more modern professions and specialities that have been evolving in recent times. These would include specialities such as electronic engineering, marketing, business management , system analysis, and urban planners (1974:85)."

It is against this highly volatile background that one should view how Spanish higher education is governed and practised, which is also different from that observed in the United Kingdom.

Higher Education in Spain

Essentially the Spanish education system at all levels is the Napoleonic one of centralisation adopted in 1845. Copying the pattern of France the Spanish universities adopted a civil-service bureaucratic system of organisation known as the"Napoleonic"university. This imposed uniformity on curriculum and practice in the universities. (Moncada, 1972). So the state awards the degrees, not the university.

Again for historic reasons university level education is geared to professional training, similar to the professional graduate schools of Law and Medicine in the USA, hence the name for courses of study leading to the award of a degree of "carrera" - literally a "career". The Spanish system is therefore one of descending models of control and dissemination of ideas to produce a "satisfactory"

system, in other words national curriculum control.

The system has a rigid structure and organisation and a relatively limited and inflexible teaching programme. All would-be undergraduates must satisfy admissions requirements with a secondary school leaving certificate (bachiller) and attendance at a one-year orientation course (curso de orientación universitaria: COU), but allow mature entry (over 25) to anyone who can satisfy a university's conditions that he or she is capable and has the right attitude. The degree programme operates on a fixed course programme with no electives, at the end of it, successful students are given the title of Licenciado. This is higher than an English BA Honours and just below a Master's. The student takes it in two cycles. The first consists of three courses (cursos) of a general nature, the second of two courses of a specialised nature. A "curso" consists of 5 or 6 subjects called "asignaturas" and lasts a year. So a student will take 25-30 subjects for his degree. Not surprisingly some students take as long as 8 years to complete it , and the author's calculations from statistics of those who matriculate and those who complete their Licenciatura is of the order of about 15 per cent (INE, 1980:30). UNED fits into this pattern.

Here then is an important point of contrast. The total number of graduates in the Open so far (1980) is around 40 thousand and the total of Licenciados in the UNED only a thousand. A rash conclusion might be that one university is much more successful than the other.

If, however, BA Honours are considered, the Open total is around 2 thousand (1981 figure), a much smaller difference.

All this can be contrasted with practice in the United Kingdom where power in Education is shared between local and central government and funding for the universities is through the Universities Grants Committee. An exception is the Open University which is funded directly from the Department of Education and Science. Degrees are general in nature, not tied to any profession, and awarded by the university. In the United Kingdom there is a deep distrust of anything suggestive of national curriculum control, and the universities have autonomy over spending and curriculum. Events in Spain are now changing however to give more control to the universities in how they spend their funds and what they teach by a new law of university autonomy before the parliament (Cortes), and this law is expected to be passed in 1982. But traditions within universities change slowly.

Process as well as curricula tend to be uniform in the universities with large classes, traditional ways of teaching by lectures, rote learning, with end-of-year examinations usually the sole criterion for pass or fail, and the programmes of study are relatively limited and inflexible. Villanueva (1980) an eminent Spanish academic, highlights the major problems which beset Spanish higher education today. The socio-cultural changes and advances taking place in Spain have resulted in a "mass expansion" from around 50 thousand in 1950 to around 600 thousand today. Universities, bound to their own traditions,

find it difficult to adapt to new methods in higher education, co-ordination with research is difficult, the increase in student numbers has not been matched by expansion in building space nor by endowment of means and equipment for teaching and research, and only a little more than a quarter of the 33 thousand university teachers have achieved their posts through public examination. Academic output is low with losses of 50 - 70 per cent in the first and second years reported.

UNED's Ideology

The 4th. August 1970 marks a watershed in Spanish educational history, for it was then that Parliament (Cortes) passed a new Law of Education which aimed at far reaching reforms throughout all levels of education to meet the demands caused by the rapid economic, social, technological, and intellectual changes mentioned previously. This was to be done by increasing the age of compulsory elementary education from 6 to 14, encouraging university reform and autonomy, a system of recurrent and permanent education, and opening up to a wider audience the benefits of higher education through night classes, modern means of communication, mature entry (over 25), and distance education. As a consequence six new universities were founded, and there are now 33, including four private ones and the UNED.

Distance education was specifically mentioned in the 1970 Law for giving people who could not attend conventional centres and follow their calendars, because of job commitments, domestic circumstances, or where they lived, the opportunity to study at any level. As a consequence on the 18th. August 1972 the UNED was founded, but it is only one of three distance institutions in existence in a carefully thought out plan. There is also the Centro Nacional de Educación Básica a Distancia (CENEBAD), which grants a Certificate in Elementary Education (Educación General Básica: EGB) founded in 1979 (CENEBAD, 1979) and also the Instituto Nacional de Bachillerato a Distancia (INBAD) founded in 1975 (INBAD, 1981) which also provides for COU.

The ideology of the UNED is similar to that of the Open, which in turn reflects the Zeigeist of other European countries in the need for social equality, continuing social and occupational adjustment, and to reduce the gap between educational opportunities now given to young people and those from which the older generations would have benefited. (CERI, 1973:5). There is also a belief behind the setting up of the UNED that it might help to renovate teaching-learning methods in the traditional universities. In its practice the UNED embodies the ideas of permanent education in courses at the undergraduate level and of recurrent education in courses of in-service training.

Three basic principles guide the organisation and practice in the UNED (UNED, 1976:15); they explain the why behind the what that is being done.

1. Broad co-operation with all other Spanish universities;
2. Collaboration with community organisations;
3. Strong decentralisation.

These principles and the various cultural differences will influence the nature of the organisation of the UNED, the courses it offers, and ways of working. Its degrees are the same as those of other state universities, as is the curriculum matter and the way it is organised in cursos and cycles. This may be contrasted with the

Open which has a similar purpose and ideology, but which is less subject to government control, has no admissions restrictions or fixed programmes of study, and a degree which is much easier to get. Although there is co-operation with existing universities in their supply of consultants and external examiners, the Open has a tighter grip on what it does, particularly in regional affairs, as will be seen.

In the Open what students learn varies according to individual wants and whims; but how, when, and where they learn does not. So one has a mixture of authority and freedom. But in the UNED what, how, when, and where the student learns depends on what others external to the student want; so this is an authoritarian system, controlled by the central government.

STUDENT CHARACTERISTICS

Available data from the Open (OU, 1981a:12-15) and the UNED (UNED, 1981:38-66) show students to be matched on at least five dimensions of analysis. They tend to be older than students in conventional universities, nearly all work full time, the bulk are married, they are drawn mainly from the white collar and professional classes, and the majority (around three quarters) have some form of higher academic qualification.

Age Nearly all the UNED students (9 in 10) are in their twenties and thirties, although a small proportion (4 per cent) are less than 20. So the UNED student body is a little younger than that of the Open where ages range from 21 (lowest age of entry) to over 70, with more than half (60 per cent) in their early twenties and thirties. But in both universities entry age has tended to drop, although it now appears to be stabilising around the figures quoted.

Sex Both universities have seen the proportion of female entrants increase since inception. It is now 30 per cent in the UNED, and was 24 per cent in 1975. But it is still a lower ratio than in campus universities, where it is 4:10 (INE, 1980:39). In the Open a steady increase was observed from 27 per cent in 1971 to around 40 per cent in the mid-1970s, and appears to have stabilised at 4:10, a similar ratio to the campus universities.

Why fewer women enrol in the UNED is difficult to explain. Although Spanish culture is changing, the idea of machismo is still fairly strong below the surface compared with the United Kingdom, and married women are less likely to study than their English counterparts. Most of the women in the UNED (83 per cent) have a job, but half (50 per cent) are unmarried as compared with only a third (31 per cent) of the men. There are also fewer job opportunities and less incentives to study for professions outside of teaching and pharmacy. But with the changing Zeitgeist this ratio could change in future.

Occupational Class The bulk of students in the UNED are drawn from the class of public employees (1 in 3), middle management (3 in 10), and the executive and professional classes (1 in 10). Since entry to undergraduate courses depends on a school leaving certificate, and since job status tends to correlate most highly with level of education, this is not surprising. For comparison in the Open a relatively similar occupational pattern is observed, with the bulk of the audience (75 per cent) having qualifications equivalent to university entrance.

It is interesting and perhaps a little ironic, that although the Open is more "open" than the UNED in its not having entrance requirements, it tends to attract an audience similar in academic qualification and occupation to that of the UNED. In neither university can the students be seen to be a sample of the population. But to be fair to the UNED, it was not expected to be.

The UNED organises Admissions courses with an enrolment of around 25 per cent. It would be interesting to see whether students are drawn from a wider social class, but so far no study has been made of this.

Audience Motives Details of a survey (UNED, 1977a: 200-201) show that the three most common reasons why people embarked on courses were: 1. To improve professional knowledge (54 per cent); 2, To broaden cultural knowledge (52 per cent); and 3. to get preferment in job promotion (51 per cent). Only one in three (32 per cent) expected promotion as a consequence of study and a similar proportion (37 per cent) said it would make no difference. A recent survey of the first thousand licenciados of the university (UNED, 1981b: 112), in which motives were matched with goals achieved, shows a close match: 43 per cent said study had broadened their professional knowledge, 50 per cent their cultural knowledge, and although 50 per cent had a motive for study to gain promotion, only 32 per cent had done so. But the interesting thing is that for almost a half (48 per cent) of the graduates, the possession now of the title of licenciado meant that he was now "recognised" as "someone" in society at large.

Study Time About half the respondents (UNED, 1977a: 191 - 192) estimated about 6 - 15 hours a week, although quite a few (18 per cent) said more than 20 hours and, at the other extreme, less than 5 hours a week (15 per cent). This is roughly the same as disposable time in the Open population of 10 -15 hours a week for a full credit.

ORGANISATION AND ADMINISTRATION

The Spanish Ministry of Education, through its Secretary of State for Universities and Research still has legal authority over the university system. It is assisted by the National Board of the Universities (Junta Nacional de Universidades) whose membership consists of the presidents of the Board of Trustees (Patronatos). The Minister presides at meetings. The Board must be consulted on all basic matters affecting the university, particularly on expansion and planning. Its permanent council is called the Board of Rectors (Consejo de Rectores). UNED forms part of this system. Apart from some detail due to its special nature, UNED's organisation is more similar to than different from that of the traditional universities in Spain. Likewise the administrative structure of the Open University is similar to that of other British Universities, but has autonomy.

From the start the three basic principles applied in the organisation of the UNED, of broad co-operation with other universities , collaboration with society, and decentralisation have worked in the following way:

Co-operation Since teaching materials had to be prepared relatively rapidly for a mass audience, the best way was to use authorities from other universities. This not only stamps UNED materials with the hall mark of authority, but also broadens the audience nationally of that authority. Co-operation is also reciprocated by the UNED's provision of materials for use in the other Spanish universities, and UNED course units are being used increasingly. Hitherto the universities have had to rely mainly on imported texts. So by having the bulk of their material written by professors from elsewhere, coupled with the fact that state control means standard curricula, UNED has managed within the relatively short space of seven years to complete its undergraduate programme of 273 courses.

Collaboration with Society This is seen not only in formal representation of outside bodies on the Council, but, more interestingly from the point of view of comparisons with the Open through the organisation, administration and operations of the 52 regional centres (Centros Asociados) which are discussed in more detail elsewhere. The Centros are patronised by private or public entities like savings banks, town halls and firms engaged in commerce and in industry. Many universidades laborales (technical colleges) are also sponsoring the UNED. These sponsoring bodies provide the capital and recurrent expenditure

Decentralisation As well as being seen in the idea of patronage and the Centros Asociados, decentralisation is also seen in the Central Seat of the UNED in Madrid, in the autonomy vested in the faculty departments. While the governing junta of the UNED lays down certain minimal norms - so-called "formal aspects" - in specifications for the creation and production of materials and student assessment and evaluation, symbolised by the "green book" or "Criterios metodológicos de la UNED" (UNED, 1976b), faculties, departments and Centros Asociados have carte blanche to elaborate with a view to enriching the learning process of their students.

Two basic points of difference between the UNED and the Open here are effects of the collaborative and decentralisation policy. They are a much greater dependence on the use of outside consultants for the preparation of the learning materials, and the involvement of community bodies. Whereas in the OU community bodies are very little involved in the patronage sense of the term (miscellaneous income from grants from outside bodies amounts to less than one per cent of the recurrent expenses), they are heavily involved in UNED. About 40 per cent of their income is from outside bodies. Again, while outside consultants are used in the preparation of Open courses, and one or two whole courses have been prepared by consortia, by and large the bulk of the work is done centrally.

Paradoxically, while the UNED may appear to have less autonomy, since like the other universities it still operates within the concept of Napoleonic centralisation, within the university itself sections appear to have more autonomy, to be less subject to a bureaucratic network or rules or "participatory democracry" than those working in the OU. This seems to be symbolised by the apparent ignorance of what is going on elsewhere by the various individual departments. For instance: there appears to be no house papers. By contrast the Open seems to overwhelm with its flood of publications for the staff which can be defended by the principle of participatory democracy. Again the principle of decentralisation in the UNED may help partly to explain why the staff:student ratio is so different, this being larger in the UNED - less rules, a less complex administrative framework.

Administration and Control

This is dealt with in more detail in the publication "Organización de la UNED"(UNED, 1976d). It includes many organisation charts. The UNED is organised in the nine divisions sketched below;-

1. Patronato this has as its function the source of co-operation between State and Society so that the UNED can meet its objectives and it is therefore basically a representative and guiding body.

2. Junta de Gobierno is a small governing body or cabinet which consists of heads of the various sections detailed below. It generally meets once a month, but a permanent division of the Junta consisting of the Rector, 4 Vice-Rectors, Director of the Institutue of Educational Sciences, the Finance Officer and the Secretary meet at least once a week.

3. Faculties Each of these has its own Junta de Gobierno whose membership takes in the Dean, directors of departments and the faculty and department secretaries, as well as those people in charge of the asignaturas of the departments. Because of its size faculty bodies usually meet only three times a year, with a monthly meeting of a small "permanent" group analogous to that mentioned in the Junta de Gobierno. Faculties of Law, Economics, Business Studies, Philosophy and

Letters are co-ordinated by a Vice-Rector of Humanities and those of Science and Engineering by a Vice-Rector of Science. The mature entry Admissions course for the over 25s, whose co-ordinator has the rank of Dean, comes under the jurisdiction of the two Vice-Rectors mentioned.

4. Departments There are 30 departments overall for the six faculties, each of which is under the control of a Catedrático (equivalent of a chair holder in the UK system). He is assisted by an Associate Professor who co-ordinates the work of the asignaturas prepared and offered by that department. Finally there is a Professor Adjunto (Associate) who may or may not be assisted by an ayudante (assistant) depending on the numbers of students enrolled whose function is to oversee a particular asignatura. Departments meet at least once a week.

5. Permanent Education This division has been established a little later than the ones dealing with Undergraduate and Access courses. It takes responsibility for both permanent and recurrent education. By "permanent" is meant programs of work pitched at a university level for people not necessarily undergraduates. By "recurrent" is meant in practice programs of work to bring established professions up to date in skills and information. In effect, this section is responsible for cultural and professional promotions.

This division has a Vice-Rector who is assisted by a director of studies and a technical director. While the first is occupied with matters of content, the second has charge of the technical preparation of all the audio-visual material of the UNED (radio programs, cassette and disc recording, films, slides and video cassettes).

6. Centros Asociados This division is the link between the centre and the provinces.

The concept of the regional centre and its organisation is so different from that of the Open that it merits more detail later.

7. Institute of Educational Science All Spanish universities now have small departments whose aim and function is to improve teaching methods through courses and other means and to undertake institutional research (MEC, 1974).

The UNED's has three principal functions each one of which is organised in a separate section: institutional research, training of UNED tutors, and counselling and guidance for students.

The institutional research aims at finding out whether UNED is fulfilling its social purpose and improving all aspects of method. To this end it has done large-scale surveys of students (UNED 1977a, 1981a) and part-time tutors beliefs and

and opinions, a survey of its first licenciados (1981b), and routinely studies of a demographic character and the academic results (UNED 1981a).

The training function is seen in the two courses of a week to ten days duration put together annually by the faculties for briefing and training the teacher-tutors in the Centros Asociados, and getting them acquainted with people at the Centre. Some courses are also held for central staff focused of the technology of teaching and learning for distance learners.

The guidance and orientation function is a service of guidelines for common norms to try to homogenise activities across faculties seen in ideas about the preparation of teaching materials, assessment, radio guides, etc. (UNED,1976b).

8. Management On this depends the economic and administrative activities of the UNED from the direction of the non-academic staff and the preparation and control of the income to the production and distribution of the written and audio-visual teaching materials as well as all the activities to do with the matriculation of students.

9. Secretary General This section is the focus of control of the legal and academic documentation of the UNED which takes in the documentation of the students and staff and examinations. This office together with the management form the base on which the sections previously cited rest. Their function is one of support and co-ordination for all the activities of the UNED.

Duties and Responsibilities of the UNED Staff

Five hundred and eleven of the UNED central staff of 779(1981) are academics, the balance being taken up by administrators, clerks, secretaries, doormen, cooks, chauffeurs, etc. The academics comprise a hierarchy of status from catedráticos (professors), agregados (associate professors), adjuntos (lecturers), and ayudantes (assistant lecturers). This is a similar pattern to that of Spanish conventional universities: only the first two categories of personnel are tenured. Unlike the OU academics, whose basic function is preparing the learning materials as members of a team and undertaking research in their own disciplines, an UNED academic is not obliged to prepare course units. If academics do prepare the course units then they receive an emolument over and above their normal salary.

Departments and staff are assigned a variety of functions but most importantly the following can be cited: 1. to decide contractual arrangements for its teaching staff; 2. to decide on the preparation and revision of the course materials; 3. to work on the assessment tests, both distant and formal; 4. to correct examination scripts; 5. to make contact with tutors of the corresponding asignaturas in the Centros Asociados to maximise co-ordinated effort; 6. to reply to queries put to them by students through correspondence, telephone, or through interview.

Each academic has charge of one asignatura, or joint charge if enrolments are high, and will have a "load" averaging 85 students. But he does not mark their course work. This function is believed essential to ensure that staff have contact with "reality" - to become acquainted with students and their learning, not merely knowing of it. Staff can hold teaching appointments in other universities, and several of UNED's staff take classes at the Universidad Complutense (Madrid University) which is on the same campus.

Here then in the duties of the central staff is a radical departure from the model of the Open. In the Open the basic task of the academics is to produce courses in a team, and to prepare assignments questions, and set end-of-year examinations. This means they may never make contact with the students they teach, except occasionally. Another difference is that Open staff are expected to research in their own disciplines; this is not so much a tradition in Spanish universities.

Part time staff in the UNED and the Open are similar in that the majority have jobs elsewhere and have little say in what courses should be produced and how they should be put together and assessed.

Regional Organisation

Centros Asociados

Most of the student support services in both universities are found in the regions. In the OU 13 regional offices organise tutorials and counselling sessions for students in 270 institutions such as universities, polytechnics, colleges and even schools for some 5,200 part-time tutors and counsellors. A sixth of the OU budget (1980 = £7.4) is spent on these"regional tutorial services". Tutors normally work full-time in other institutions and will spend about 4 - 9 hours a week during the OU academic year of 32 weeks depending on what they are contracted to do.

By contrast, in Spain the so-called "Associate Centres" are founded and patronised and funded by entities outside UNED, to the tune of 771.99 million pesetas (1980) or £4.29 million, equivalent to 39.4 per cent of the running costs (UNED, 1981a:36), are autonomous, are conceived as places for teaching and learning and cultural enrichment, and are staffed by teacher-tutors paid by those entities, who work on a part-time basis (UNED 1976c). This is the practical consequence of one of the original organizing principles of collaboration between state (as represented by the UNED) and society.

Associate centres are key pieces in the diffusion and efficacy of the teachings imparted by UNED, since they are its academic intermediaries and those in contact with students dispersed throughout the land.

From a mere eleven in 1974 they have grown to 52 today (1980/81), and have a median enrolment of 650, which can vary most widely from 7000 in Madrid province to only 60 in Almadén (Ciudad Real). The number of teacher-tutors range from 166 to 3 with a median of 30, and student-tutor ratios range from 138 to 4 with a median of 24. All told, teacher tutors number 1696.

Centres are places where course examinations are set (two a year), assignments are corrected, where students can go for tutorial and personal advice from their teacher-tutors. They are conceived also as cultural centres with a library and study rooms, laboratories for practicals, a central hall for mass lectures or other activities, and offices and rooms for administrative and teaching staff. In other words they should provide an ambience to complete the personal development of students not only through face-to-face help on an individual or a group basis, but also through the organisation of seminars, lectures, student get-togethers, and a variety of cultural activities.

All these functions should form the common denominator of all the Centros; but theory does not always mate with practice. In fact individual initiatives are limited by the financial position of eahc centre. To grasp adequately this problem it is necessary to go back to the origins of UNED.

UNED was envisaged from the start as a decentralised university in which centres would be autonomous in their funding, localisation, and policies. Such autonomy it was hoped would foster the support of dominant local groups, and ensure their acceptance of responsibility fo their centre, as well as the greater efficiency of the teaching system. Thus centres could be established through the initiative of public, private, or corporative agencies, a condition being a sufficiency of students. Ageneies who wished to promote and to sponsor a centre made a formal request to the Council of the UNED with the offer to underwrite all expenses. This takes in buildings, heating and lighting, equipment, and materials, etcetera, and the salaries of all personnel, including the teacher-tutors.

The principal sponsors to date have been local governments an town councils, savings banks (who are also charitable organisations), the armed forces, universidades laborales (technical colleges), and commercial and industrial enterprises. So one can find centres in the Chrysler car company, Ramón Areces (Spanish department stores), Radiotelevisión de España, and the Ministry of Finance . But these centres are for their own staffs and are closed to ou siders. The non-insitutional centres are open to everybody.

In the beginning UNED's need to count on at least some centres reduced the level of conditions imposed on their founding to

a minimum. There was a tendency to accept centres which were not prepared to offer facilities for all types of carrera. The results in this first stage was a dozen centres, some of which were first class, and others third rate.

Today there is a tighter control on conditions and things have immeasurably improved, with UNED setting aside 30.52 million pesetas (£170,000) to support the weaker centres. But there are still centres which do not provide a service for all carreras, with Science subjectsbeing the worst hit. This lack of support for Science subjects, coupled with the known difficulty of teaching scientific subjects at a distance, is the reason why, in the growth in volume of students over the years, numbers in these subjects have not increased as much as with the verbal subjects.

Nevertheless, regular attendance has doubled in per cent since 1976, and although the main motive for attendance is still for examinations and enrolment, attendance at classes, meetings, and consultations has increased, so that centres are playing a greater part in the development of their students.

A grave problem facing UNED and the centres is their geographical location, which stems at least in part from the policy described above. As more centres have been founded so the provision has improved. Three out of ten students still live more than 50

kilometres from them, with half the students living in the same city as a centre or up to a short distance of 30 kilometres. At present 14 provinces are without centres. The ideal would be a centre for each of the 50 provinces, so that no student was too far away. The teacher-tutors' desire is that they become cultural focal points with a university-like ambience.

Physical distance from a UNED centre undoubtedly influences attendance, but the phenomenon of "mental distancing" is also apparent. Regular attendance is greater among women (37 per cent) than among men (28 per cent). This nationwide average does not alter radically in those towns where there are no centres. The relatively scarce attendance is surprising, since in the eyes of the UNED students the greatest problem with learning at a distance is the lack of contact between themselves and other tutors and students, of the lack of a university ambience, and in general loneliness. Undoubtedly a key factor is lack of time. The fact that the majority of students have positive attitudes about the general aims of the centres and their functioning, and that they believe centres are working efficaciously toward benefiting their cultural development, suggests this.

Teacher-Tutors

The idea of a "teacher-tutor" - someone who not only teaches but also guides, motivates, counsels and acts as an adviser - was recommended as part of university reform by the 1970 Act. The role is similar to that of the tutor counsellor for Foundation Course students introduced by the OU in 1976. Unlike OU part timers UNED staff work in the centre themselves. Their work schedule is flexible to fit their duties elsewhere: they arrange appointments with students, answer queries by letter or telephone, mark assignments, and send monthly reports about student assessment to the UNED headquarters.

Duties and responsibilities of the UNED teacher-tutors are both voluntary and obligatory. They have carte blanche in the organisation of classes, seminars, meetings, and cultural events. Obligatory is the correction of the students' assignments, for which UNED recommends that, together with the mark or grade awarded, the teacher-tutor adds explanatory comments, fills in gaps, and makes suggestions. Such "instructional dialogues" are of summary importance, not only because they are at the base of the tutorial function but also because for most students it is the only point of contact with their tutors, since the attendance at centres, which is voluntary, is scarce, as has been noted.

Enquiries have shown (UNED, 1981a:78) that over a third (38 per cent) of students still receive back their work without comment. This is a big improvement over a previous enquiry (UNED 1977a) when two thirds received no comments, which suggests that either the tutor's work load is too heavy for him to make comments or that briefing from the Centre is inadequate or simply ignored. Nevertheless the majority of students (78 per cent) think their teacher-tutors are doing a good job. This can be contrasted with the OU conditions for tutoring, enforced by systems of monitoring and detailed advice to tutors that they must not only grade but also make critical comments in a form of "tutorial dialogue" (OU 1977b and c), and no doubt the majority meet those conditions.

It is scarcely likely that OU students would have favourable attitudes towards tutors who returned work without comments in view of the propaganda put out about their duties and responsibilities.

More than half (60 per cent) of UNED teacher-tutors see their major function as guiding, counselling, controlling the students, giving him support to carry on the difficult task of studying in isolation, rather than on merely teaching "subject-matter". What they believe they <u>should</u> be doing and what they <u>are</u> doing shows quite a gap. Apparently the bulk of their time goes on correcting assignments and completing the teaching of

the didactic units. Work-load is again postulated as the causal condition. In spite of this complaint the bulk (71 per cent) view positively UNED's future; only a small number (20 per cent) view the future pessimistically. (UNED 1977b:17)

As an illustration of events in an Associate Centre, consider those of the San Pablo Centre in Madrid. (San Pablo, 1977). In 1976 it had a staff of 57 teacher-tutors (one third with doctorates), responsible for 8067 students taking 3 to 4 courses a year over all carreras. Tutors marked 42538 assignments, an average of 746 each. Between February and May students had opportunites to listen to 29 lectures (cultural enrichment) given by outside speakers. This centre is responsible for students as far away as the city of Salamanca (214 kilometres), but most (85 per cent) are from Madrid itself.

ADMISSIONS POLICIES AND COURSES OFFERED

ADMISSIONS

Unlike the 44 other universities in the United Kingdom, the Open opens its door to anyone (subject to quotas) capable of profiting from university level education, irrespective of age, status, or previous qualifications, and this defines the term "Open". There is a lower limit of entry of 21, but this is likely to be lowered to 18 in the early 1980's.* Although most of those admitted have some qualifications, 40-50 per cent have no normal university requirements. This is different from the UNED which has no age bar, but which is in harmony with the 32 other universities in its matriculation requirement of a school leaving certificate (bachiller), plus attendance at a one-year university induction course (curso de orientación universitaria: COU) for students under 25. For those over 25, the passing of a special test of aptitude, capability and character is obligatory in all universities.

From the start UNED recognised that a mature student will need to recover the rhythm and habits of study learned in his schooldays, will need to fill gaps in his skills and knowledge and will need to become tuned to a different way of learning at a distance. In 1974, UNED mounted its Admissions courses for people over 25. Modelled on the academic regime followed by undergraduates, the course lasts eight months. All students

* Unexpectedly, despite what was taken to be wide support for the proposal in the University, the OU's December 1981 Senate decided not at the moment to open the door to 18 year olds.

study a common core of subjects (Spanish language and literature, a modern language, and geography and history) plus two subjects tied to their future undergraduate programme. Someone interested, for instance, in Industrial Engineering would study special mathematics and physics as well as the core subjects. The whole course will cost a mature entrant 10-12000 pesetas (£56-67) plus textbooks. Those who do pass manage it in a year, mainly because for most the ground has been covered before.

In the period 1974-76 almost 13000 people registered, and one in two presenting for the examination passed, making one in four of the original entry. This contrastswith figures for mature entry to the conventional universities where only 10-25 per cent presenting for the examination passed. (UNED, 1976a:9). These figures suggest that provision of an Admissions course was a good move in UNED strategy.

Admissions, however, are eased considerably in both universities by allowing for the transfer of previously gained qualifications in colleges to other universities. This is called "convalidaciones" (UNED, 1975) and "credit transfers" in the Open. Transfers are perhaps a little less complex in Spain because of the equivalence of courses. For instance if a student in UNED or a conventional university has passed five asignaturas these are transferable. On average about one student in five in the Open has a course equivalent or more allowed. There are no figures for UNED.

Carreras and Courses

Whereas patterns in what the Open student can study differ from the rest of the United Kingdom universities, in the UNED they are the same. So a student say of Law in UNED would tend to learn the same subject matter as a conventional student in Madrid, Salamanca, or Barcelona. Generally formal curricula are standard across universities, although the greater university autonomy which is to come will no doubt stimulate change.

The Open operates what is called a modular degree programme, while UNED's is carrera focused. Carreras correspond roughly to careers or professions. It is geared to specific professional training, similar to the professional graduate schools of law and medicine in the United States. All state recognised high level professions are taught in faculties (Facultades) which are the professional schools within a university.

A student of the Open can choose courses from whatever faculty he wishes to attain the equivalent of six full credits for an ordinary degree and eight for an Honours. A full credit course is equivalent to about 12 - 15 hours study a week over an academic year of 32 weeks. He can mix courses in Arts, with Social Science or Mathematics or Science and so on in any combination of half or full credit equivalents. By contrast, the UNED student has no choice: he must study all subjects which are linked with a carrera.

The carrera itself is defined in cursos, ciclos, and asignaturas. To get his degree of Licenciado the UNED students must complete five cursos phased in two ciclos. A curso is not the equivalent of an Open course: it is the equivalent to a year's full-time work in which a student will study five or six subjects called asignaturas. So what the Open calls a "course" the UNED call an "asignatura". An asignatura is about equivalent to a one-third credit in volume of subject matter to an Open full credit course. In the first ciclo, the UNED student studies three cursos of a rather general nature, and in the second ciclo he specialises more in two cursos. Altogether then he takes 25 - 30 subjects for a degree, which is considerably more than the Open student.

There is a third ciclo which consists of doctoral studies. A student must do four asignaturas plus a thesis. To date seven or eight doctorates have been awarded

The carreras offered by UNED for 1980 - 81, their administering faculty, and proportions of students on each are shown in Table 1 with Faculty enrolment in the Open for comparison.

TABLE 1

Faculties and Courses of Study in the UNED and the Open University
(Figures in parenthesis indicate numbers of asignaturas/courses)

Faculty and Carrera		Enrolment (Per Cent)	Faculty	Enrolment (Per Cent)
Total Number Students		41,462		72,852 **
UNED			OPEN UNIVERSITY	
Law (25)		24.0	Arts (25)	24.6
Philosophy and Letters			Social Science (22)	18.5
Geog/History (26)	8.4		Education (15)	9.5
Philology (26)	3.7		Mathematics (16)	15.6
Education (31)	9.3		Science (24)	14.5
Psychology (5)*	6.6	28.0	Technology (21)	17.3
				100.0
Economics and Business				
Economics (31)	6.0			
Business (31)	7.9	13.9		
Science				
Physics (21)	1.9			
Mathematics (23)	2.7			
Chemistry (23)	1.5	6.1		
Industrial Engineering (29)		2.2		
Admissions		25.8		
		100.0		

* New Course

Source: UNED 1981a

OU Statistical Bulletin May 1981

** = Student-Courses: Number of finally registered students = 59,092

It will be noted that the courses of study are quite distinct in the two universities, but neither offers medicine, and pharmacy, popular with women in Spain. Eleven carreras are grouped by five faculties with Admissions making a sixth, and there are about twice as many students taking Philosophy and Letters as any other faculty, there being relatively low percentages in Science and Engineering. This shows the traditions in Spanish education which, in turn, shows Spanish culture with its emphasis on the Arts. The distribution by carreras show Law and Education have the largest enrolment, and take a third of the students.

A direct comparison with the Open is difficult: in general the Open students are balanced more evenly over the various disciplines. One reason for that is the policy of quotas for each faculty laid down by the Open.

Enrolments are about 5000 down from the peak of 51,000 in 1979 - 80, and this is distributed evenly across carreras. But in the growth period from 11,400 in 1973 to date a larger proportion of the increased enrolment has been taken by Law, Philosophy and Letters, and Economics and Business Administration than Science or Industrial Engineering. But Admissions have varied the most and has increased its share of the total to around 25 per cent. The constant increase in the population has been due partly to a corresponding increase in cursos and asignaturas, which are now complete, except for Psychology, which began only in 1979 - 80.

The Open has kept a steady state in its growth, and the proportions in each faculty has been roughly the same over the years.

An interesting point is that almost all the enrolments (above 84 per cent) in Science, Engineering and the Law are men. Women favour the carreras of Philology, Education, and Geography and History because these are linked with the teaching profession which is women dominated.

Other Courses

In addition to their undergraduate programmes, both universities offer other courses of study. Students of the Open can study single subjects without registering for a degree and have a choice of 80 courses, most of which are the same courses as the undergraduates study. There are some 8519 of these so-called "associate" students. A few of these courses are for updating knowledge in a particular field, known as Continuing Education, mainly at present for those working in education or the social services. There are also short courses of 8 - 10 weeks duration designed to help people in their everyday lives whether as parents, consumers, school governors or members of local communities. There are eight of these courses with an enrolment of 19,571. So altogether the Open student body is swelled by about 28000.

UNED now offers three programmes of in-service training. One is for teachers of Business Administration, qualified already by a Diploma gained after the first cycle of cursos, who enter directly the second cycle of studies, to study a further eight asignaturas for their Licenciado. In 1979/80 this course enrolled 7,068 students. Another gives a chance to teachers in the elementary education field (educación general básica: EGB) to update their skills and knowledge and to specialise in certain subjects (UNED, 1979). This course lasts a year, has attracted about 5000 students, and a Diploma is given to those successful. The other in-service course is for nurses who trained under an old scheme

to bring them up to new levels. This consists of four asignaturas, lasts a year, has 8000 students, and the Diploma of Asistente Tecnico Sanitario is awarded to successful students.

In-service training is therefore much better organised in the UNED than the Open University since in the public sector control is from the centre, and not vested in local authorities as in the United Kingdom. Distance education for updating skills and knowledge is thought in Spain to be particularly suitable for organising groups who are scattered throughout the land, who work in the public sector.

Enrolment Formalities

Unlike the Open the UNED does not specifically advertise for students. Instead it relies on increasing public awareness of the University and its activities as a result of stories in the press or broadcasts to attract applicants.

From any one of the 52 regional centres the would-be UNED student obtains an envelope of registration forms and cards. First he must register with his local Centro Asociado who stamp the application form. This form, together with a Faculty card, separate forms for each asignatura, a registration card, an identity card, a form for abstraction of demographic knowledge, self-addressed labels for replies, a photocopy of his bachiller, birth certificate and two passport type photos he sends to the Central Registry. The secretary in each department of a faculty will now have a record card for each student to which is affixed a photo for entry of the results as his studies develop. (UNED, 1979b). There is less proliferation of forms in the Open and the whole operation is centralised.

Ten asignaturas is the maximum a UNED student is allowed to matriculate in during any one year; two full credit equivalents in the Open. The facts are that two thirds (67 per cent) of students take fewer than five, the mode being three or four (UNED, 1977a:198) and in the Open it is one full credit equivalence.

So both groups of students take on roughly the same amount of study a year.

Each asignatura will cost the UNED student around 3000 pesetas (£17). This will cover 6 course units, 4 assignment booklets, but not textbooks. A full credit in the Open will cost the student £120 in 1982. With changing exchange rates, inflation, differences in size of courses, and variations in income and standards of living of UNED and Open students it is difficult to make a comparison of costs. But it looks as if the Open student is paying a little more. A recent UNED survey (UNED, 1977a:59) showed that half the students felt costs to be too high.

COURSE CREATION, PRODUCTION, AND DELIVERY

CREATION

Members of a UNED department first prepare a study plan and put it before the faculty dean for scrutiny. It may or may not cover a complete set (i.e. 5) of cursos (5 - 6 asignaturas each curso) which form a program of studies for a carrera.

If the dean approves, he sends the study plan to the members of the Junta de Gobierno (UNED's governing body). If approved the Rector of the University (corresponding to the OU Vice-Chancellor) forwards it to the Minister for Universities and Research in the Spanish government, and from him, assuming approval, to the Consejo de Ministro (advisory body of the Ministry of Education). Given success in all these formalities, a citation is printed in the State Bulletin and funds released for UNED staff to expedite the plan. All this takes usually a little longer than a year. Once again it can not be changed in any way without repeating the procedure.

This method can be contrasted with that of the OU where interested groups prepare a plan and put it before a Faculty Board for discussion. If approved it is passed on to the Planning Committee, and finally to Senate for general approval. After that course teams are set up to produce the learning materials. Around four years would not be an unreasonable estimate to make of the time scale from initial planning - committee approval - preparation - delivering to students.

PRODUCTION

Written Materials

Back in the department UNED staff members apportion responsibilities for the various assignments of a course. A budget of around 240,000 pesetas (£1350) is allowed for writing the learning materials for each asignatura; but this is likely to be increased to 400,000 pesetas (£2250) with UNED holding the copyrights. This is thought necessary as more and more UNED publications are being sold to other universities. The person directing the preparation of the asignatura has carte blanche to do as he will: he can delegate the whole or part of the writing to an outsider consultant or he can do all or part himself, claiming the necessary fee as extra pay.

Audio Materials Fifteen-minute length radio programmes for broadcasting through Radio Nacional de España (RNA) and the audio-cassettes for student use in their own homes are produced in the UNED's own studios, and so far about 3000 have been made. This contrasts with the Open where the British Broadcasting Corporation (BBC) is totally responsible for production and transmission. So far they have produced over nine years a total of 5,500 programmes and there are about 250 television and 325 sound programmes transmitted a year. Clearly there is a difference of emphasis here. As said previously UNED has no television service.

Delivery

Once written the learning materials are contracted out to printers who presumably take care of the display; there is no formal system of editing as in the OU, nor is there a studio for art work.

Printed materials are assembled and stored in the large central warehouse of the UNED from which they are bulk delivered to any one of the 52 Centros prior to the start of the academic year. What and how much is required derives from returns of student enrolments by the Centros Asociados.

Students collect the whole of their year's course work from their particular Centro Asociado just as conventional students would buy books from their university book shop. The magnitude of the handing over operation can be imagined in Madrid for instance where one of the Centros has more than two thousand students. Long queues of students form over a period of three or four days, but each student is served almost as quickly as someone buying theatre tickets since the logistics have been carefully planned beforehand.

This system is preferred to the old one which was modelled on that of the Open University of posting materials at various intervals. Prior to 1979, when the new system was introduced, problems arose in the delivery system: only one third of the students received them on time, another third experienced some delay, while another

third experienced serious delays. It also reduces budget costs, although no precise figure has been quoted.

A number of differences between the UNED and the OU are pointed up in the facts about the creation, production, and distribution of the learning materials. The UNED staff appear to have less autonomy than their counterparts in the OU in the creation of new courses since these are still subject to top-down (government) control. But in the production of the materials themselves the reverse seems to occur, this being more individualistic and less of a team effort. UNED staff also receive more pay if they write the units, which is not so in the OU.

By and large however most of the UNED didactic units now are written by professors from other universities. This compares with the early days when central staff wrote them. The change stems from the rapid need to increase the numbers of courses offered without duly expanding the tenured staff. Collaboration with and involvment of other Spanish universities is of course one of the organising principles.

This trend has allegedly generated a problem for the UNED staff who, unlike their OU counterparts must not only look after an asignatura in preparing examination questions etc. but also have charge on average of 85 students. It is alleged that teachers from conventional universities tend to write in textbook form rather than in self-instructional form, the didactic

unit being more or less just a study guide. This occurs even though producers have at hand a detailed guide of instructions and principles for writing units, compiling tests and preparing audio cassettes (UNED 1976b). Allegations about the inability of outside consultants to write units is not unknown in the OU and sometimes leads to contracted work being rejected as unsuitable for self-learning. But it is apparently worse for UNED staff who have to use the contracted materials for teaching students in their own groups.

ACADEMIC REGIME

An asignatura credit requires that an UNED student study on average about 4 - 5 hours a week over a period of eight months from October to June in contrast to the OU course credit requirement of around 10 - 14 hours a week from February to October. The UNED academic year matches that of conventional universities in Spain and the UK, but the OU's does not.

Four main components comprise the planned teaching system for most asignaturas 1. printed materials which combine cognitive importance with strategies for learning; 2. audio-visual material in radio, cassettes and transparencies; 3. self-tests, tutor-marked assignments, and twice yearly formal exams for assessment of difficulties, progress and status; 4. opportunities for individual and group tuition and counselling and enrichment activities (seminars, lectures, etc.) at regional centres.

On the surface, then, the formal academic regime of the UNED and the OU student seems similar. The idea behind the planning is the same. This is to use new methods of educational technology in the presentation form of the material and a variety of media and sensory channels so as to arouse and sustain motivation; make tuition auto-didactic, but to avoid isolation normally associated with home-based study by giving opportunities to students for meeting tutors and fellow students regularly face-to-face. But there are detail differences not only in the weight given in the teaching plan to the various components but also in the weight in time students are observed to give to the planned components.

Study Materials

These consist of teaching units called unidades didacticas, radiophonic guides, and audiocassettes.

Didactic Units As with the OU the written unit is the fundamental component in the UNED student's learning system, this being planned so as to make the content self-instructional. In form and conception and irrespective of faculty the pattern and design is clearly marked.

Each asignatura consists of six units printed on A4 size paper which are usually bound separately. Up to the late seventies these were delivered through the post at intervals to the student's home as are OU units today. But students now collect the set from their local Centro Asociado at the beginning of the new session together with assessment booklets which contain printed exercises and spaces for responses.

Each unidad didactica will contain six sections with a key theme, idea, or concept around which the subject matter is orchestrated. Each asignatura then has about 36 organising themes. The first of the six units always contains the scheme or synoptic view of the asignatura. Material is keyed to stock texts (usually one or two). And here is a possible difference in detail with the OU: in the UNED the didactic unit seems to be more an adjunct than a main text as it is with most OU courses.

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Unlike the Open the UNED does not specifically advertise for students. Instead it relies on increasing public awareness of the University and its activities as a result of stories in the press or broadcasts to attract applicants.

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Each of the series of themes in turn consists of these parts: A summary scheme or "cognitive map" showing the basic concepts and how they relate; instructions about bibligraphic sources for the various points of content; explanatory material including all types of graphic aid such as schematics, drawings and photographs; a set of self-testing exercises with answers. Some "enrichment" work may be included; but is not obligatory.

The student of the UNED is encouraged to tackle his study in this way. He takes in a general view of the theme through a conceptual map showing how elements go with the whole, looks at the professor's instructions about the different parts of the unit, consults and studies the various questions in the text or basic manual, and supplements and consolidates with material and explanations the author of the unit feels necessary to fill gaps, and finally work through the self-correction exercises appearing at the end of each theme. Answers to these are provided. If the student gets the answers wrong, he is trusted to go over the material again. Psychologically this method of working appears to pay homage to both cognitive (conceptual maps) and behaviouristic psychological (self-correction-reinforcement) principles. But, (this is only the author's interpretation: discussion has failed to yield an answer).

It is interesting to see how the Open's materials are engineered in comparison since prima facie they are far more impressive and sophisticated. The author's discussion with Educational Technology experts in Spain support that view. Nathenson (1979) pinpoints the OU techniques which take on : study charts, aims and objectives, preliminary lists of terms, concepts, etc., introduction, study guide, in-text questions followed by answers, self-assessment questions, in-text summaries, cross references to other materials and media, specific activities, checklists and review exercises. But Nathenson says "while all of these strategies aim at the same educational end - to help students learn more effectively and efficiently - few have been systematically evaluated. OU teachers do not know, for example, whether a list of objectives placed at the beginning of a course unit actually helps the student to learn the related material. Nor do teachers know very much about how students respond to various types of self-assessment questions, yet they are included in one form or other in virtually all OU course materials".

In effect both in the UNED and in the OU, the strategies appear to depend on trust rather than on hard facts. A most fruitful exercise would be a comparative study of the two instructional technologies.

Assessment Booklets UNED students do all their course work assignments in specially-produced booklets, of which there are four keyed to units 1, 2, , 4 and 5 of their asignaturas. The booklets are A4 in size, contain some 12 pages, with spaces for the name, address, ID number, and name of the asignatura on the front page. Printed inside are a variety of objective-type tests (say 10 items), 4 or 5 questions with spaces below for a 300 word answer for each, and key terms for defining. The back page is left clear for students to ask questions about any problems they have had with content or method. This method is in complete contrast to that of the Open, where questions are set separately, students respond on their own paper, and there is no facility for asking questions. Objective tests are given in many courses, these are marked by machine, but kept separate from written assignments of the "essay" type.

Students send these assignment booklets to their teacher-tutor in their Centro Asociado by certificated post for correction and comment to correspond with the times they are working on a particular unit. Results areentered on the student's personal record card in the centre and the work returned to the student. Again there is a contrast with the Open. Here the students send them to their tutors who then send marked assignments to the Assignments Handling section at Milton Keynes, a note is made of the mark, and then assignments are returned direct to the student. So UNED has regional recording, the Open central recording.

There are no assignment booklets for units 3 and 6, because after these units a formal test on what students have learned takes place under timed conditions (1½ to 2 hours) in the Centro Asociado. The first test is partly diagnostic, and students are told what to do to improve if necessary.

Radio and Television The written text may be complemented by the spoken word in cassettes mailed directly to students or through 15 minute programmes produced by the technical section of UNED and then transmitted through the Third Programme of Radio Nacional de España. But the service is limited to only 15 hours a week with transmission from 8 o'clock to 10.30 nightly, except Sundays, a fifth of the time being given to Admissions students. So increasing use is being made of cassettes because of their flexibility of use and possibilities for repitition, and to date 3000 have been made, an average of about ten per asignatura. There is no television, but its use is being explored through videotapes and 30 have been made so far for use in Centros Asociados.

By the time the UNED came into being in 1972 it was clear to the planners that the cost of full-scale radio and television presentations would be prohibitive in the context of the expenses required to implement the 1970 Law. (Education now takes 18 per cent of the Spanish budget). A major element in the Open University's cost is broadcasting. Each year the BBC produces around 250 television and 325 radio programmes in partnership with the Open University. The agreement between the BBC and the University also provides for the transmission of programmes on the BBC network for 35 hours of television and 26 hours on radio. In 1980 this contract came to £7.5 million, one-sixth of an expenditure of £44.9 million. (OU 1981:77)

Telephone as a Teaching Medium Both universities have attempted to build this into their systems but use it differently.

A pilot experiment begun in 1976 code-named CONSULTEL (Roldán Ruiz, 1977) showed that a formal system of telephone counselling between student and tutor had a good chance of success. This system now operates for students of Business Studies who are already Diplomates of other universities but who wish to take the second cycle of courses leading to a Licentiate and for Admissions students. It is to be extended to high volume courses of the first cycle.

The system works like this. A student with a learning problem (not a personal one) can call a Madrid number from anywhere in Spain between 19.00-21.00 hours (live operator) or any other time (automatic answering machine). The would-be caller has been briefed beforehand with written instructions about procedure to answer the following questions in serial order: name, discipline, town and personal telephone number, brief statement of problem. This business-like procedure is necessary since the amount of traffic the line will handle has been scientifically planned by communication engineers with estimates of 30 - 60 seconds per call. Between 19.00 - 21.00 hours on the same day as the student codes his problem, he stands by his telephone ready for a reply. Since efficacy and efficiency are the essence replies must necessarily be brief; in fact they last an average about 10 minutes, ranging from 5 - 20 minutes, depending on the problem.

Apart from the initiating call, there is no cost to the student; the UNED pays as part of its service.

The Open's use of the telephone as a tutoring instrument is described by Robinson et al (1979) and has been the subject of a case study (Hammond, Young and Cook, 1978). A clear difference is seen between its use in the two universities.

Whereas the UNED is a one-to-one conversation of student-tutor, the OU is largely a group discussion substitute for what might in normal circumstances be a face-to-face tutorial session with up to 8 persons taking part. The Open of course assumes that as a normal part of the tutorial function students will telephone their tutors at home. However, this is an informal system: no guidance is given to students about posing problems succinctly and efficiently. No evidence is at hand about how often students tend to telephone their tutors, how long they take over it, whether they could be more business-like, or what the attitudes of tutors are about having students telephone during leisure hours.

Regional Centres Both UNED and the Open complete the academic regime of their students through face-to-face tuition and counselling in regional centres (Centros Asociados in Spain). But there is such a difference in their conception and functioning that a separate section is necessary, and details are reported elsewhere. In the UNED only about a third of the students (30 per cent) attend their centres regularly, which is an improvement over the years with the introduction of more centres. But 22 per cent never attend except when necessary for the two compulsory examinations (UNED, 1981a: 75).

The information to date then is that most of the UNED student's time will be spent at home studying printed materials, listening to cassettes, and writing assignments with little time devoted to radio or activities in regional centres. In contrast it has been estimated (OU, 1977:8) that the amount of time a student spends on his work is 65 per cent reading printed materials, 10 per cent listening to radio or viewing television, 15 per cent face-to-face teaching, and 10 per cent on writing assignments. It is difficult however to separate reading and assignment times, since the two are all of a piece in the learning of subject matter. It seems fair to conclude that the Open student's learning is characterised by a greater variety of method than the UNED's.

ASSESSMENT

Differences are seen here between the two universities: the Open has a system of continuous assessment in which course work, marked by part-time tutors, counts toward 40 - 60 per cent of the total mark, the balance being obtained in one three-hour formal examination at the end of the academic year in October and November. (OU, 1978b; 1979c).

In UNED the student takes two formal examinations, one in February, the other in June, with re-sits in September. Marks are averaged over the two observations. In the final evaluation, which takes place in September at a session called the "convocatoria," the personnel in the various departments responsible for their particular examination, weigh the marks the student gets in all aspects of assessment, even including conduct in classes and seminars in awarding a pass or fail. The weight given to course work in this assessment will not exceed 20 per cent; in fact, what counts with the majority of examiners is the formal examination results. UNED's argument against equal weighting is that the system is open to abuse; work submitted might not be the student's own. The fact that course work hardly counts in final assessment is bad for the morale of the teacher-tutors, who feel "distant"from the central seat of UNED in both a literal and metaphorical sense. It is interesting that while two-thirds (64 per cent) of the students think evaluation of course work is necessary, the balance think it is of little use or even a waste of time.

The self-tests are viewed more positively: the majority of students (82 per cent) think they are useful and necessary (UNED, 1981a: 80-81).

A most interesting and important tendency is that rather more than half (65 per cent) of the Open students who pass their formal examinations gain at least a grade or so higher on continuous assessment than on their examination results (OU, 1978c). No study has been made on how results might be affected were examination results only to be the performance criterion as it is in the UNED. But this fact suggests that pass rates would be fewer. James (1973) has shown how student rankings differ when one method or the other is chosen: this argument is accepted by the Open University and explains the use of the two components. More Open students may come forward for examination because their continuous assessment scores give them a chance to predict the likelihood of success in the examinations. The combined continuous assessment and examination results also reduces the chances of bias in the scores due to comparatively severe or lenient marking by tutors.

Further analysis showed that Open students in Mathematics, Science and Technology are likely to benefit more from continuous assessment because they have more time to work on their problems. Some students actually do better in formal but it is interesting to see that they are more likely to be Arts, Social Science, and Education students - what might be called the more loosely-coded disciplines.

RESOURCES

UNED's income for 1980 was 1088.75 million pesetas (£6.0 million). Direct government funding contributed 42.0 per cent, the remainder came from fees of students (25.3 per cent), sales of books and materials (12.7 per cent), a supplement for in-service training of teachers (12.0 per cent), and a balance brought forward (8.0 per cent). But to this income must be added the expenses of salaries of tenured staff (cuerpo de catedráticos) who are paid directly by the state 100.0 million pesetas (£0.56 million), and the expenses of running the Centros Asociados, which are sponsored by outside agencies, of 771.99 million pesetas (£4.29 million).

So the true income of UNED in 1980 was 1960.74 million pesetas (£10.8 million), and, all told, the government's direct contribution is just over a quarter. Indirectly, of course the government pays more through its contribution to the provincial Centres.

Salaries accounted for more than half UNED's budget, but 35.13 million pesetas (£195,000) was spent on capital equipment and a further 10.26 million pesetas (£57,000) went on subsidies to the Centros Asociados. The balance went on goods and services, including the costs of producing and distributing course materials. To this must be added the expenses of running the Centros.

Capital expenditure on buildings is not known as these belong to the government.

The 1980 Budget for the Open is more straightforward (OU, 1981:17). Income for recurrent expenditure was £44.9 million of which the government contributed almost all (88 per cent), the balance being of student fees (10.5 per cent) and research grants and profits from marketing of Open materials (1.5 per cent). A major element in the university's costs is broadcasting. Each year the BBC produces about 250 television and 325 radio programmes in partnership with the Open University. In 1980 this contract with the BBC accounted for about £7.5 million of the expenditure (one-sixth). Regional Services too accounted for about one-sixth, and both these components are missing in the UNED budget.

Staffing Levels

In 1980 there were 511 academics and 268 administrators and clerical staff in UNED's Headquarters and 2176 at the Open, of which 400 were academics. In the Regional Centres the figures were UNED 1696 and the OU 5200. So whereas in UNED academics outweighed the rest by 2:1, in the Open the reverse was the case, with Non-Academics outweighing Academics by 4:1.

If recurrent expenditure and staffing for 1980 are related to student input, the following results are seen (Table 2).

Table 2

Students costs in a) Money and b) Staff of UNED and the Open in 1980

University	Input (1000)	Expenses (£million)	Central Staff	Part-time Staff	Cost Ratios per Student: Money	Central Staff	Part-time Staff
UNED	45	10.8	779	1696	£240	58	26
Open	61	44.9	2176	5200	£736	28	12

It can be seen that the Open Student cost three times more than the UNED and requires double the staff both at the centre and in the regions to teach and administer him.

We need to exercise caution when we compare staffing and recurrent costs in the two universities. Costs of the UNED should be considerably lower because there is no TV transmission and only 15 hours of broadcasting a week and because the bulk of the costs of regional tutorial services are borne by public bodies. In the OU about one sixth of the recurrent expenditure is due to broadcasting, which is totally controlled by the BBC, while another one sixth is expended by regional tutorial services in the hire of premises for administration and schooling and payment of salaries.

This said, there appears to be a considerable residual to be explained after deducting costs for BBC and regional services. This of course raises a question that could profitably be researched . Part of the residual difference in costs could be due to underfunding of the UNED by the Spanish government. It will be recalled that earlier we said that Spain had, since 1970, undertaken a massive increase in the quantity of provision of education at all levels, seen in the proportion of the Spanish GNP (18 per cent) devoted to Education. But the tenfold increase in higher education students over 20 years, the scarcity of plant and good teachers, etc. meant that money had to be spread widely with an admittedly (see Villanueva, 1980) less than satisfactory service.

There is, however, another dimension at a deeper level of analysis. The figures on academic staff and administrative staff ratios show a startlingly disparity in the two universities, part of which can be explained in underfunding as said. But the question arises: is the UNED a less bureaucratic system than the OU in which the

academics are given greater carte blanche over what they do? Or is the OU too fat with administrators and support staff with less effort going into production and teaching than in self-analysis and administration?

The question of staffing levels and budgets is thought to merit further investigation.

ASSESSMENT OF OPERATIONS AND OUTCOMES

The term "results" we interpret more widely than mere numbers of students who graduate or who pass or fail their courses or who drop out - often the sole warrant by which people judge an institution. What might loosely be termed the "psychological wellbeing" of staff and students is also important to know. What are their feelings, opinions and judgements about the university's ideology and future, the courses and the instructional methods and the system in general. So, we include also points from three large-scale surveys on how UNED students and teacher-tutors see things. (UNED 1977a;1977b; 1981a)

A detailed exploration of the undergraduate results will be presented in a separate report (James 1981). Here we present a digest.

Academic Results

UNED compute results about rates of students attending examinations and passing or failing from initial registrations for asignaturas. In contrast, the Open computes from final registration figures. This is a period some three months after initial registration, and is a shakedown period in which on average one quarter of students do not continue with their course. This must be borne in mind in comparisons, as must the fact that the Open uses continuous assessment as equal weight

with formal end-of-year exams for the award of a course credit. There is likely to be a cause-effect connection between assessment strategies and patterns of results in universities (James, 1973).

Data

The UNED's covered 268 different asignaturas produced over 1977 - 1980 in 10 departments for a total of 1014 results and a student-course volume of 453,540 on initial registration. The Open's covered 115 different courses of full or half-credit status in the same period in six faculties for a total of 331 results and a student-course volume of 229,680 on final registration. (UNED, 1981a; OU EAs 76/2, 84/2; OU SBs/ 78/79/80/81)

Omitted from the analysis are non-undergraduate course results: these are Admissions, PRONEP and A.T.S. courses.

Associate student results are not included in the Open figures.

Numerical and categorical variables were included in a) numbers of students registered; b) numbers presenting for exams; and c) numbers of registered passed. Each was categorised by year and department (Faculty in the Open). These numbers were re-expressed as ratios:

% b/a = examined:enrolled

% c/b = passed:examined

% c/a = passed:enrolled

These three categories of numerical results are interlinked: the more or less students who present for examinations, the more or less the likelihood of more or less passed. The % b/a gives some idea of abandonment of course; the % c/b gives an idea of variability in examining. The techniques of analysis were exploratory data analysis, which were considered more suitable for this sort of data (Erickson and Nosachuk, 1979)

Overall Comparisons

The numerical summary (Table 3) of the important features averaged over faculty and year highlights some interesting differences.

Table 3

about here

Looking first at the median course results (these do not take into account volume of students), on average about a half (52 per cent) of the initially enrolled UNED students present for examinations, of these about two thirds (69 per cent) are successful, which leaves about a third (32 per cent) of the initially registered with pass certificates. In contrast, well over half, (70 per cent) of the Open students present themselves for examinations, nearly all (91 per cent) pass, which means about two thirds (63 per cent) of the finally

Table 3

Numerical Summary of Undergraduate Course Results over 1977-1980

(Rounded to nearest one per cent)

Result	Group	Highest Value	Upper Quartile	Median	Lower Quartile	Lowest Value
Examined	UNED	100	72	52	37	9
Enrolled	Open	91	76	70	62	26
Passed	UNED	100	85	69	50	0
Examined	Open	100	94	91	87	49
Passed	UNED	100	47	32	22	0
Enrolled	Open	87	70	63	56	23

registered pass. So results in the Open are considerably higher than the UNED.

The figures in the Table for Upper and Lower Quartiles gives some idea of how the course results spread around those medians. On average the spread is at least twice as great in the UNED, and five times greater in the rates for passed:examined (UNED = 35 points v Open = 7 points).

The highest and lowest values are much more extreme in the UNED results ranging from 100 per cent to 0 per cent (except in examined: enrolled) whereas in the Open it is much less.

The message of the Table is that while level increases as we go from the UNED to the Open, the spread decreases; the Open results are more compact. This means that for the Open the level by itself provides a better guess relatively of the three categories of result than it does in the UNED. The low spread means consistency, which means better predictions.

If the bell-shaped so-called "normal" curve is the standard for comparison of the distributions of course results - and it is <u>not</u> assumed that they should match this model - then neither the UNED nor the Open distributions make a particularly good fit.

Further analysis by Faculty showed that this affected the level of a student's course results, with the difference being much greater for the UNED than for the Open student. In the UNED students of "verbal" subjects like Philosophy and Letters and Law tend to do better than their counterparts in the Science-based faculties (31 per cent v 23 per cent). In the Open Arts and Education score above the norm, while students of Mathematics are likely to be around 7 points lower than average.

The results for passed:enrolled are pretty much the same each year for both set of students, but whereas in the Open the causal conditions (abandonments and examination failures) are similar from year to year, in the UNED they are not. But one effect tends to cancel out the other in computing the final results.

Degree Figures

Up to 1980 982 students of the UNED applied for the title of Licenciado; (UNED, 1981b) so it is not known if the figure is higher. In contrast about 40 thousand Open students were awarded their degrees of BA. But two points must be borne in mind to avoid hasty conclusions: a Licenciado degree is much higher than a BA Ordinary, and relatively few conventional students reach it. A truer picture can be given if BA Honours of the Open is given; only 2000 have been awarded to date. So, the contrast is less dramatic; it is important to remember too that the Open has almost double the undergraduates of UNED. Nevertheless, all things considered, the Open appears to be a little more successful in producing graduates than the UNED.

How Students View the UNED and the Open

The surveys mentioned indicate that student opinion on a variety of aspects of their university are positive. The majority of the students think that the main function of UNED is to facilitate entry to those interested in higher education, irrespective of where they may live or the job they may be doing, and this UNED is doing in a positive way. It is playing a good part in the academic and cultural life of Spain, in spite of the inconveniences of loneliness and lack of communication with tutors, because of its advantages of overcoming financial and geographical difficulties and the absence of fixed hours. Its future possibilities are felt to be good because of the advantages it has over other universities and the great help of audio-visual media.

It is interesting to compare these beliefs with what has been observed in the Open of a study of 4550 graduates recently undertaken by Swift (1979). Over 7 in 10 graduates reported that the Open had proved a "broadening and stimulating experience" in their lives.

How the Teacher-Tutors View the UNED

Although they saw fundamental inconveniences in distance-teaching systems as lack of communication, student isolation, and lack of a university ambience, the majority (71 per cent) saw the future possibilities of UNED as good or very good; only a few (20 per cent) saw no future. Since the time of that survey, the number of Centros Asociados and teacher-tutors who staff them has doubled, and so these opinions may have changed and are probably slightly better.

The main grumbles of the tutors was the insecurity of their professional state and relatively weak links both with the UNED and with the Centros themselves. They believe their main duties and responsibilities should lie more in guiding, counselling, and giving students their psychological support and less in teaching the specific content of units. In effect there was a big gap between what they believe they ought to be doing and what in fact they were doing. Again, opinions might have changed in the past four years.

In the Open no studies have been made of the general views of part-time tutors so far; so it is not possible to make a comparison.

Dropouts

It is extremely difficult to get precise figures for dropouts in the two universities, and McIntosh and Morrison (1974) explain why. There is the problem of knowing who has abandoned study completely (dropped out) and who has temporarily abondoned it, intending to return later (dropped down). The average appears to be about 48 per cent a year (UNED 1981a: 98) of drop out or dropdowns, and this includes Admissions and the in-service training course for teachers of Business Administration. If these last are excluded, abandonment drops to about 37 per cent. The fact that 50-70 per cent of students in conventional universities drop out within one or two years (Villamueva, 1980:56) means that this figure compares favourably.

UNED staff point out that the university is giving people a chance to take subjects at a tertiary level, and as such is helping to raise the cultural life of their country. They also point to numbers of UNED dropouts who intend taking up studies at traditional universities, where any credits obtained with them may be transferred. This suggests that the UNED is opening up other opportunities to people who might otherwise have had no chance.

CONTENTIOUS ISSUES

What is attempted here is not an evaluation of events and outcomes in the UNED and the Open as good, satisfactory, or bad, but the recognition of some value matters, questions, or problems for distance education in general.

Both the UNED and the Open appear to be fulfilling their social function in giving a second chance to those who merit it. They are reaching out to a new audience similar in age and social background and education, spread out nationwide, and offering them an education on easier terms than those in campus universities, and with new methods. But there the similarity of UNED and the Open ends: there are vast differences at all levels from organisation to practice to results.

The key to the relatively rapid developemnt of UNED's academic programme in comparison with the Open's is centralisation of control, and authoritarianism at all levels. Standard curricula across universities meant that planning in this field was relatively straightforward; the only difficulty was getting the asignaturas written. Here a difference is in the much slower team method adopted by the Open using their own staff and the UNED's individual method using staff in other universities. In the Open each course proposal is subject to much debate before approval, and many proposals do not reach fruition.

It is the same with Admissions and In-Service training courses. Where the public is conditioned to state control it is much easier for the Spanish government to organise courses for the whole of its state employees (e.g. teachers and nurses) than it is in the United Kingdom where state control is anathema to most people and where the state has not such a grip. As things are, UNED is ideal for in-service training because people are at work all day and scattered throughout the land. Without UNED large scale plans for bringing people to the new standards would be extremely difficult.

Some of the explicit differences between the two universities can be seen in the following list:

	UNED	Open
Admissions	Bachiller for students under 25, otherwise mature-entry course.	No formal qualifications required
Degree	Licenciado, with five "cursos" each of 5-6 asignaturas (as in conventional university) Carrera orientated	6 full credits for BA Ordinary, 8 for Honours obtained from any Faculty.
Calendar	Conventional: October - June	Unconventional: February - October
Organisation	State controlled. Provincial Centres sponsored by outside agencies and relatively autonomous	Autononmous. Constructs own curriculum. Controls regional centres.
Regime	Printed materials + cassettes + face-to-face tuition + limited radio and no tv.	Printed units + radio+ tv + tutorials + (certain courses only) summer schools.
Course Creation	Largely individual in outside consultants	Team system of OU staff + outside consultants

Distribution of Materials	At Regional Centres and Bookshops at beginning of year	Via Post Office at intervals throughout the year
Enrolment	No formal advertising. Students enrol at their nearest Centro Asociado No quotas.	Formal advertising. Student enrol centrally Quotas on Foundation Courses.
Student Support	52 Centros Asociados. staffed by part-time tutor-counsellors, working from those Centros. Facilities for study listening, consultations.	270 Centros throughout United Kingdom staffed by part-time tutors or counsellors. Teaching rooms only.
Assessment	Two formal examinations. per asignatura per year set and marked by staff member.	Course work marked by part time staff and formal examination. Teams of external examiners and two externals.
Resources	35 per cent government direct funding. Balance from sponsors of Centros Asociados, Fees and Sales of Books Staff: 511 Academics + 288 Others	87 per cent government funded. Staff: 2500

It will be seen from this list that there is a multiplicity of differences, some of greater importance than others, and a number of questions arise.

Is it good policy to have degrees that are attainable only by a few highly motivated students who are willing to come for years on end? It will be noted that about 40000 BA Ordinary Degrees have been awarded to the thousand or so Licenciados in the UNED. Even allowing for the fact that the Open has twice the number of undergraduates and has been going a little longer, this is still a big difference. But this difference shrinks if Honours degrees are considered, for then the Open has awarded just 2000, and even then the Licenciado is harder to get. There was a recommendation in the 1970 Law that universities award a qualification of some sort (Diploma?) at the end of the first cycle of cursos, but it has not been taken up. Is this because of vested interests of faculties? Is it reasonable to suppose that if there were such a scheme this objective would be more easily attainable and motivation to continue more sustainable. As it is getting a Licenciado degree takes around eight years in the conventional university, with about 85 per cent of the students failing to make it. So how much more difficult for the distance education student?

Would it not be better for countries contemplating the adaption or adoption of distance-teaching systems to have entrance requirements like the UNED? This would increase the likelihood that students were on an intellectual and attitudinal level to enable them to profit from the course materials and the way they were presented. The Open without such conditions appears to be getting along nicely without such admissions requirements, but it is not known how many are deterred from entering. That there is a demand for help of this kind is seen in the proliferation of the Open University pre-courses, of which there are around 40 in London alone. Entering higher education without any sort of qualification is a big jump for anyone, and it is noticeable that around half to three quarters of the Open University population, have already reached normal university entrance standards by the time they enter. For anyone without qualifications it is a daunting prospect, and it is not to be wondered that so few so-called people outside the white collar and professional classes try. An Admissions course would accomplish two things: it would give a more realistic goal for people without qualifications to aim at: and it would screen out a larger proportion of people who get in but who are unlikely to make the grade. As things are, as more and more unqualified people enter, so a greater proportion of the budget has to be set aside for counselling them.

While both universities have fairly high dropout rates for courses with the OU about 50 per cent and UNED about 60 per cent, subject to variations due to courses of study it is interesting to speculate whether such statistics would change were the form of assessment to change.

In the OU rather more than half (65 per cent) of the students passing their exams gain at least a grade or so higher on continuous assessment than on their own exam results (OU, 1978). No study has been made on how results might be affected were examination results only to be the performance criterion, but this fact suggests that pass rates would probably fall.

Similarly one could speculate what might happen if UNED adopted a weighting system in which course work results counted for more than at most 20 per cent of the total assessment mark.

What weight to give each assessment component is contentious. There is some empirical evidence (Hartley and Braithwaite, 1977) albeit restricted in scope of subject matter, numbers, institution and replications, that course/examination mark weightings can vary handsomely without radically altering the rankings of the students observed. So one cannot conclude definitely that a 20 per cent weighting is insufficient; again the aims and objectives of the course is a qualifier. They are the criteria against which to estimate the amount of course work or examination marks needed for a valid judgement.

Trials using different weights are easily simulated with computers.

Continuous assessment as a part of the examination system of the competence of a student, together with the assessment of his performance under examination conditions is now well established in higher education in Great Britain today. In the Open University the fact that a student can monitor his own performance and determine or calculate his chances of passing his course is believed to sustain his academic drive in the face of difficulties which part-time students face. It also increases the likelihood of his taking his examinations because he will not wish lightly to throw away all the effort and sacrifice he has made in his leisure time. There is also an interactive learning effect; the fact that his course work counts sustains his drive and learning effort; this, in turn, improves his learning, adds a further increment to it, and so improves his chances of passing his examination. Under continuous assessment, then, a strong assumption is that not only is a chance given to skills and knowledge that cannot be adequately tested under examination conditions, but also the student will learn more.

It is most interesting that in the OU the discipline in which students pull up their marks in continuous assessment is Mathematics. It is fair to assume that under non-examination conditions students who must have recourse to formulas of various kinds or solve problems in engineering can tackle such tasks more "naturally" i.e. as they might in the course of their professional lives. Under the time restrictions of an examination it would seem that people who have to tackle problems of a scientific kind or numberical kind

could be at a distinct disadvantage in comparison with their counterparts studying more loosely coded subject matter.

The argument in the UNED that in continuous assessment one can not be sure that the work presented is the student's own and that cheating could take place is, of course, a fair one. However, if continuous assessment is combined with formal assessment under controlled observational conditions, then a safeguard is assured in observable discepancies between a student's performance on course work and examination assessment. Where such a discrepancy arises, then students either fail or else they are subject to a viva voce examination to explain the source of the discrepancy.

Surveys in the UNED have shown that a large proportion of students feel that course work is a waste of time. This would surely not be the case if it were given more weight in assessment. Equally important, the work of the part-time tutors would be brought within the system, which would mean a great fillip to morale and work-satisfaction.

Another difference that needs explanation is the wide scatter of results both within and between faculties seen in UNED in contrast to the Open University. In the Open as in all English Universities, examinations are set and the results assessed not only by internal but also by two external examiners to ensure comparability. Perhaps this accounts for closer similarity of results in the Open Courses.

By English University standards the pass rates for UNED students are poor, but hearsay evidence suggests that in comparison with results for conventional Spanish Universities, the results are "not too bad". Since curricula and courses are similar, a comparison of outcomes of UNED with those of the conventional Spanish Universities should be much easier than in the United Kingdom. But at the time of writing no estimates are available.

Differences in pass rates can reflect technical differences in faculty criteria and cultural differences, since there is no absolute benchmark as there is in, say, temperature readings, against which to match results. Standards of examining may differ, and just as it appears to be the norm within the professional examination system in the United Kingdom of accountancy, law, surveying, engineering, and so on, to fail and refer much greater percentages of students than in universities, so it might be in Spain where, as mentioned previously, the history of curriculum development is linked with the professions. The high failures may be due to jealously guarded standards and the wish of professionals to keep entrance to the professions limited.

Short of running an experiment with OU and UNED students working similar tests - one fraught with difficulties - no valid conclusions about the efficacy of one system or the other are possible.

Part-time teachers in the Centres instead of part-time teachers working in classes belonging to other institutions would certainly increase the chances of unity and coherence in any system and possibly reduce administrative costs considerably. But that system is easier in Spain which has a tradition of "pluri-empleos", i.e. people with more than one job.

Central academic staff of UNED usually have a load of anything up to 85 students to service. A possible gap in the teaching cycle in OU methodology is caused when staff prepare and present material but do not actually teach any of it. The teaching phase in the cycle is valuable for assessing what points have or have not got across as well as learning from the information and fresh ideas of students, all of which is valuable information for judging the efficacy of a system and making changes for the better.

Would not staff be more efficacious if it not only produced subject matter but also taught it?

The idea of the sponsorship by municipalities and business enterprises of Associate Centres is imaginative. Here the Spaniards are doing apparently what members of the OU are contemplating for the future in establishing links with other educational authorities to fulfil the concept of recurrent education. Whether the business and manufacturing community would take to sponsoring centres and courses for its employees is perhaps premature.

But total sponsorship has its dangers in the uneven distribution of centres and varying quality. Centres can have too much autonomy, with subsequent lack of control, and there is a danger that more powerful centres will break away from the parent body and demand its own courses. Perhaps some compromise would be possible - a joining and combining of elements from the two systems.

Is the UNED method of working more cost effective? This is probably the most interesting question of all.

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ACKNOWLEDGEMENTS

For the supply and discussion of information the writer is grateful to: Dr Eduardo López (course production), Agustín Mengod (broadcasting), Pío Navarro and Emilio Nogales (results), José Antonio Roldán (Proyecto CONSULTEL), Carlos Roura (Centros Asociados), Francisco Velasco (Resources), Joaquín Valverde (Distribution), and José Luis Lorente (Checking MS for gross errors).

APPENDIX A

Undergraduate numbers by Faculty and by Year over the four academic years 1977-1980

a = numbers enrolling for asignaturas (UNED) and courses (Open)

b = numbers presenting themselves for examination

c = numbers of examinees approved

(N) = numbers of asignaturas/courses per faculty

THE UNED — Departments or Carreras*

Year		1 Dero	2 G e Ha	3 Fila	4 Educ	5 Econ	6 Empr	7 Fis	8 Mat	9 Quim	10 Ing	Total
	N	(25)	(20)	(24)	(26)	(23)	(25)	(16)	(17)	(19)	(21)	(216)
1977	a	25150	10778	6458	20676	12953	9817	3218	3743	2684	4306	99783
	b	11345	5669	4732	10383	3793	2900	1593	1462	964	1584	44425
	c	9246	3473	2822	5362	2814	1965	635	825	444	611	28197
1978	N	(25)	(25)	(29)	(32)	(29)	(31)	(21)	(23)	(23)	(25)	(263)
	a	37662	13396	6992	24159	14301	10972	3361	4554	2967	3120	121484
	b	14105	4973	3278	7332	4464	3315	1157	1390	726	1227	41967
	c	11856	4310	2696	6089	3590	2639	789	1065	564	660	34258
1979	N	(25)	(26)	(29)	(31)	(29)	(31)	(21)	(23)	(23)	(29)	(267)
	a	40062	12936	6523	15158	15309	12253	4168	4119	2834	4407	117769
	b	14848	8671	4836	11605	5802	5124	1496	1645	1012	1629	56668
	c	11271	3851	1813	5334	2945	2297	1044	1215	706	1034	31310
1980	N	(25)	(26)	(29)	(31)	(30)	(31)	(21)	(23)	(23)	(29)	(268)
	a	41823	13996	6154	14620	10869	10272	4539	4606	3163	4462	114504
	b	16955	9303	4132	9621	5667	4925	1987	2197	1129	2007	57923
	c	13051	3837	1357	5013	2930	2418	1151	1325	708	1017	32807
Total	N	(100)	(97)	(111)	(120)	(111)	(118)	(79)	(86)	(88)	(104)	(1014)
	a	144697	51106	26127	74613	53432	43314	15286	17022	11648	16295	453540
	b	57253	28616	16978	38941	19726	16264	6233	6694	3831	6447	200983
	c	45424	15471	8688	21798	12279	9319	3619	4430	2422	3322	126772

* Departments 2,3, and 4 belong to the Faculty of Filosofía y Letras
5 and 6 belong to the Faculty of Económicas y Empresariales
7, 8 and 9 belong to the Faculty of Ciencias
Derecho and Ingeniería Industrial are separate faculties

THE OPEN

Faculties

Year		Arts	Social Sc	Education	Maths	Science	Technology	Total
1977	N	(20)	(20)	(12)	(14)	(21)	(16)	(103)
	a	19308	16129	8291	9495	9166	12391	74780
	b	15489	12330	6097	6425	6873	9053	56267
	c	14269	10647	5659	5885	6274	7777	50511
1978	N	(21)	(23)	(12)	(15)	(23)	(19)	(113)
	a	19130	16106	7260	10237	10165	12991	75889
	b	15438	12373	5331	7067	7238	9054	56501
	c	14069	11131	4877	6350	6621	8097	51145
1979	N	(23)	(22)	(11)	(15)	(23)	(21)	(115)
	a	20614	15082	7672	11573	11098	12972	79011
	b	15910	11345	5376	7750	8082	9007	57470
	c	14328	10260	4838	6941	7403	7972	51742
1980	N	(23)	(22)	(12)	(18)	(26)	(22)	(123)
	a	19194	14867	6914	12133	10116	12802	76025
	b	14751	11090	5000	8348	7253	9005	55447
	c	13521	10046	4593	7490	6635	8084	50369
Total	N	(87)	(87)	(47)	(62)	(93)	(78)	(454)
	a	78246	62184	30137	43438	40545	51156	305705
	b	61588	47138	21804	29590	29446	36119	225685
	c	56187	42084	19967	26666	26933	31930	203767